

Citation for published version:

Keane, L & Loades, M 2017, 'Low self-esteem and internalizing disorders in young people: a systematic review', *Child and Adolescent Mental Health*, vol. 22, no. 1, pp. 4-15. <https://doi.org/10.1111/camh.12204>

DOI:

[10.1111/camh.12204](https://doi.org/10.1111/camh.12204)

Publication date:

2017

Document Version

Peer reviewed version

[Link to publication](https://doi.org/10.1111/camh.12204)

This is the peer reviewed version of the following article: Keane, L. and Loades, M. (2017), Review: Low self-esteem and internalizing disorders in young people – a systematic review. *Child Adolesc Ment Health*, 22: 4–15, which has been published in final form at <https://doi.org/10.1111/camh.12204>. This article may be used for non-commercial purposes in accordance with Wiley Terms and Conditions for Self-Archiving.

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Low self-esteem and internalising disorders in young people: A systematic review

Background: Cognitive behavioural therapy for low self-esteem (LSE) has shown promise as a trans-diagnostic model for treating mental health difficulties in adults. To ascertain the potential value of this treatment approach in working with young people with internalising disorders, we need to develop our understanding of LSE within these mental health conditions. The aim of this review is to explore 1) the co-occurrence of clinically significant anxiety/depression and LSE in young people, and 2) the association between LSE in childhood and adolescence and mental health difficulties in later adolescence and emerging adulthood.

Method: A systematic search of three electronic databases (PsychInfo/Pubmed/Google Scholar) was conducted to identify relevant studies.

Results: Ten studies examining the association between LSE and clinically significant anxiety/depression in young people met the inclusion criteria, as did eight studies investigating the association between LSE in under 18 year-olds with internalising difficulties in later adolescence/emerging adulthood. Although relatively few studies were identified, studies consistently supported the co-occurrence of LSE and internalising disorders in young people, particularly in young people with co-morbid anxiety and depression. LSE in childhood and adolescence appears to be a relatively weak predictor of the development of anxiety and depression in later adolescence and early adulthood.

Conclusions: Further research investigating the relationship between low-esteem and mental health difficulties in young people and its implications for treatment in this age group is indicated.

Keywords: self-esteem, internalising disorder, anxiety, depression, adolescence

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Key Practitioner messages

- There is a lack of literature exploring the relationship between clinically significant anxiety and depression in young people.
- Evidence to date suggests that young people with clinical depression, particularly those with co-morbid anxiety disorders, report lower self-esteem compared to young people without internalising disorders.
- There is less evidence for the association ~~with~~ between LSE and the development of later anxiety symptomatology in later adolescence and young adulthood.
- ~~Further larger-scale studies of young people with clinically significant anxiety and depression within child and adolescent mental health services (CAMHS)~~ are warranted.
- ~~With regard to clinical practice the evidence to date suggests that a trial of Fennell's model of low self-esteem (1997) within this client group is indicated.~~

Introduction

Mental health disorders are relatively common amongst children and adolescents with approximately one third of young people experiencing a mental health disorder at some point in their lives (Merikangas, Nakamura, & Kessler, 2009). Within the UK specifically, YoungMinds report that one in ten children aged 5-16 years of age had a diagnosable mental health disorder, with 3.3% of (or 290,000) young people meeting the criteria for an anxiety disorder and 0.9% (or 80,000) experiencing serious depression (Green, McGinnity, Meltzer, Ford, & Goodman, 2005). Given that the World Health Organisation defines mental health disorders as one of the leading causes of disability worldwide (Lopez, 1996), the importance of a comprehensive understanding of ‘clinically significant’ mental health problems and effective treatment options is warranted. For the purposes of the review, ‘clinically significant’ is defined as meeting the relevant cut-off for anxiety/depression based on a validated scale or a diagnostic interview.

There is growing interest in the understanding of low self esteem (LSE) and its association with mental health difficulties in adults as well as children and adolescents (henceforth referred to as ‘young people’) (e.g. Evans, 1997; Fennell, 1997; Mann, Hosman, Schaalma, & de Vries, 2004). Fennell (2009, p.6) defines self-esteem as ‘the overall opinion we have of ourselves, how we judge or evaluate ourselves and the value we attach to ourselves’. Self-esteem is commonly measured using self-report measures, the most widely-used of which is the Rosenberg Self-Esteem Scale (Rosenberg, 1965).

A body of studies have demonstrated a correlational relationship between LSE and symptoms of anxiety (e.g. social anxiety, generalized anxiety disorder) and depression (loss of interest in and reduced activity, weight change, feelings of worthlessness) at different ages (e.g. Battle, 1987; Battle, Jarratt, Smit, & Precht, 1988;

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Plunkett, Henry, Robinson, Behnke, & Falcon Iii, 2007). However, the extent to which LSE is associated with ‘clinically significant’ anxiety and depressive disorders in young people is yet to be established.

The relationship between mental health difficulties and self-esteem (SE) is considered to be complex, with Fennell (2009) proposing that LSE can either increase an individual’s vulnerability to developing a mental health problem, or can develop as a consequence of a variety of mental health difficulties (e.g. the experience of panic attacks reducing an individual’s interest in activities; Fennell, 1997). It is important to acknowledge the conceptual overlap between the main constructs of low self-esteem and depression, and their associated measures. Some authors (e.g. Watson, Suls, & Haig, 2002) argue that LSE and depression represent the same construct. However, Orth and colleagues (2008) point to the importance of distinguishing between LSE and depression. This conclusion is based on the rationale that cross-sectional correlations in adolescent populations have been found to be as low as $-.36$ (Roberts & Gamble, 2001), that SE appears to be more stable than diagnosable mental health disorders (Trzesniewski et al., 2003) and a relationship between depression and SE has been shown to exist despite controlling for prior levels of each construct.

A review of the studies investigating this relationship in young people is especially pertinent when one considers the emerging success of cognitive behavioural therapy (CBT) for LSE in improving outcomes for adults with a variety of mental health disorders (Waite, McManus, & Shafran, 2012). Fennell (1997) advises that addressing LSE directly within psychological interventions is most effective in improving outcomes for individuals when LSE represents a vulnerability factor for the development of ongoing mental health difficulties. The cognitive-behavioural treatment model of LSE (Fennell, 1997; Figure 1) in adults is formulation-driven and involves

Low self-esteem and internalising disorders in young people: A systematic review identifying and challenging dysfunctional assumptions and negative beliefs about the self, referred to as the 'bottom line' (e.g. 'I am worthless/unlovable'), as well as noticing and logging positive data about the self and one's positive qualities.

Although a meta-analytic review indicates that interventions focused on improving self-esteem in children and young people have shown promise (Haney & Durlak, 1998), there are no such trials of Fennell's (1997) CBT trans-diagnostic treatment model in young people with mental health problems. In order to establish whether evaluating the efficacy and effectiveness of psychological therapies for LSE, such as Fennell's CBT for LSE, as a trans-diagnostic treatment in the child and adolescent clinical populations is indicated, we first need to establish whether LSE is a trans-diagnostic factor associated with internalising mental health problems (including all anxiety disorders, depression and dysthymia) in this age group.

In addition, the vulnerability model postulates that the negative evaluative thoughts associated with LSE represent a risk factor for the development of later mental health difficulties (e.g. Beck, 1967). Establishing whether LSE in childhood/adolescence represents a vulnerability factor for the development of later internalising mental health problems would help to ascertain the appropriateness of investigating CBT for LSE as an intervention to circumvent the development of anxiety and depression.

The aim of this review is to establish what is known about LSE and anxiety/depression in young people by addressing the following questions:

- Do children and adolescents under 18 years of age with clinically significant anxiety disorders and/or depression also have LSE as measured on a validated psychometric questionnaire?

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- Do children and adolescents (under 18 years of age) with low self-esteem as measured on a validated questionnaire develop depression and anxiety symptomology later in adolescence and young adulthood?

Method

Procedure

Published research was identified through APA PsychNet by searching for the following terms in keywords, title and abstracts. Search terms used to identify papers across databases included a combination of "self concept" OR "self esteem", child* OR adoles*, and anxiet* OR anxious* OR "anxiety disorder*" OR depress* OR "internal* disord*" OR "low mood". Within APA PsychNet, filters were set to only include articles related to 'childhood (birth-12years)' and 'adolescence (13-17 years)', and peer-review journals. No time restrictions were made in this database. A further search was conducted in Pubmed using the following search terms: 'Anxiety Disorder' (Majr) OR 'Depressive disorder' (Majr) AND 'Self esteem' (Mesh) available in English language and including samples of young people (birth-18 years). In light of the large number of papers identified within this database and to identify any further relevant papers, the search in pubmed was 'restricted to past 10 years' on the available filters. Google scholar was checked (the first 100 results) using the above terms to identify any further articles that may have been missed. Reference lists of included articles were checked. Email alerts allowed for additional articles identified following the initial search.

Although it was considered that many of the relevant articles for question 2 would be located during the initial search, a further systematic search was conducted to locate any additional relevant articles. A combination of (anxi* OR depress*) AND (self-esteem) with filters set to 'Longitudinal study 'childhood (birth-12years)' and

Low self-esteem and internalising disorders in young people: A systematic review ‘adolescence (13-17 years)’ and ‘peer-reviewed journals only’ was conducted in PsychInfo. In addition, the reference list of ~~the review article by across the lifespan~~ Sowislo and Orth (2013), ~~entitled review article~~ ‘Does low-self esteem predict anxiety and depression?’ ~~was~~ ~~ere~~ ~~hand-searched~~ ~~examined~~.

The search strategy is presented in accordance with PRISMA guidelines (Moher, Liberati, Tetzlaff, & Altman, 2009) relevant to systematic reviews (Figure 1 & 2). Papers were initially screened for suitability by title. Abstract and/or full-text papers were then screened to determine suitability according to the inclusion and exclusion criteria described in Appendix 1.

A second reviewer checked a proportion of the selected papers as a reliability measure to ensure that they met the criteria. Additional papers were also discussed with the second reviewer when it was unclear whether or not they met the criteria. Agreement between the first and second reviewer was reached on all papers.

Data Analysis

It was decided that a meta-analysis would be conducted if appropriate, with a narrative review being conducted if few studies ~~were~~ identified. The Systematic Assessment of Quality in Observational Research (SAQOR) criteria (Ross et al., 2011) was used to evaluate the quality of each of paper for the systematic review. SAQOR evaluates studies according to six areas: sample, control/comparison group, quality of exposure/outcome measurements, follow-up, distorting influences, and reporting data. This was adapted slightly to increase relevance to the current review. If a study was determined to be less than ‘adequate’, then it would be excluded from the analysis. See Appendix 2 for scoring criteria. Cohen’s d values (Cohen, 1988) were calculated, where possible, as an estimate of effect size for question 1. Pearson’s r values were calculated, where possible, as an estimate of effect size for question 2. It is worth noting the

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limitations inherent in using correlations as an estimate of effect ~~e.g. effect can be
impacted by the size of the sample.~~

Results

Question 1: Do children and adolescents with clinically significant anxiety disorders and/ or depression also have LSE as measured on a validated psychometric questionnaire?

2311 articles were identified in a search completed in March 2015. Following the initial search, a total of nine articles meeting the inclusion and exclusion criteria for question 1 were identified (Figure 1). A search of the above terms within Google Scholar identified one further article. Reference lists of included articles were also checked but did not reveal any further relevant articles. Following the identification of appropriate studies, a meta-analysis was not considered appropriate due to a lack of comparable studies (e.g. identified studies included a variety of different measures and thresholds for diagnosis and methodologies).

[INSERT FIGURE 1]

In terms of quality according to SAQOR (see Appendix 2), the majority of studies were deemed to be of adequate quality, with Schreiber et al. (2012) being rated as high quality due to the inclusion of a matched control group.

Overview of included studies

Studies included one experimental (Schreiber, Bohn, Aderka, Stangier, & Steil, 2012), five longitudinal cohort (Carbonell, Reinherz, & Giaconia, 1998; Beevers, Rohde, Stice, & Nolen-Hoeksema, 2007; Isomaa, Väänänen, Fröjd, Kaltiala-Heino, & Marttunen, 2013; Trzesniewski et al., 2006) and four observational studies both within the community (Tripkovic et al., 2015) and inpatient and outpatient child and

Low self-esteem and internalising disorders in young people: A systematic review adolescent services (Guillon, Crocq, & Bailey, 2003; Kazdin, French, Unis, Esveltd-Dawson, & Sherick, 1983; Orvaschel, Beeferman, & Kabacoff, 1997). Sample sizes ranged from 40 (Schreiber et al., 2012) to 2070 (Adolescent Mental Health longitudinal cohort in Isomaa et al., 2013; Väänänen et al., 2014). Participants ranged from 5-20 years of age. Mental health diagnoses were reached based on a variety of assessments ranging from the use of diagnostic interview schedules conducted by trained raters (e.g. Schedule for Affective Disorders and Schizophrenia ~~in~~ and School-Aged Children in Beevers et al., 2007 demonstrated high inter-rater reliability) to a variety of self-report measures (e.g. cut-off score of 24 for Social Phobia Inventory (SPIN) used in Väänänen et al., 2014). The degree to which the specificity and sensitivity of measures was reported varied widely. See Table 1 for further details on measures used.

INSERT TABLE 1 HERE

Community samples of young people (comparisons with healthy controls)

Although the number of studies meeting the criteria for inclusion in the current review is relatively limited, community sample studies indicate that young people with ‘clinically significant’ internalising disorders have lower SE when compared to healthy controls (Carbonell et al., 1998; Isomaa et al., 2013; Trzesniewski et al., 2006; Väänänen et al., 2014). Despite a number of potential limitations, namely high rates of attrition and the use of self-report scales as diagnostic measures, analyses from the large scale Adolescent Mental Health Cohort provide relatively robust support for the presence of lower SE scores in young people with ‘clinically significant’ social anxiety disorder (SAD), depression and combined SAD and depression (Isomaa et al., 2013; Väänänen et al., 2014). Within this cohort, those with co-morbid difficulties had the lowest reported SE scores ($M = 19.8$; as measured on RSES from 10-40), followed by those with depression ($M = 23$), and those with SAD ($M = 27.3$). The difficulties

Low self-esteem and internalising disorders in young people: A systematic review associated with using self-report measures for diagnosis were overcome within a study conducted by Trzesniewski and colleagues (2006) in which mental health difficulties were assessed using an interview schedule administered by a psychologist. Within this large-scale study (Dunedin cohort), those with LSE were twice as likely to have depression as healthy controls.

Several further smaller-scale community studies, also using diagnostic interviews (according to DSM-III, DSM-IV), provide further evidence that young people with a diagnosis of major depressive disorder (MDD) have significantly lower SE than never-depressed controls ($d = 0.74, 1.19$ respectively; Beevers et al., 2007; Carbonell et al., 1998).

Regarding the prevalence of co-occurring LSE and mental health difficulties, Tripokovic and colleagues (2015) found that approximately 40% of young people with LSE as measured on the Child and Adolescent Depression Scale, met the criteria for clinically significant depression. Similarly, Isomaa and colleagues (2013) found that 41-51% of young people with LSE scored above the clinical cut-off for depression, while 22-36% scores met the criteria for SAD. Although ~~This~~ indicates that ~~although~~ the presence of LSE increases the likelihood that a young person will also have clinically significant internalising disorder, ~~it draws~~ caution should be taken to avoid over-emphasising the association between internalising disorders and LSE across young people, particularly in males with anxiety.

Clinical samples compared to healthy controls

Similar patterns emerge when considering samples recruited through clinical settings. In a comparison of young people hospitalized on an in-patient psychiatric ward to healthy controls, SE was shown to be significantly lower in the clinical population, even when controlling for age, gender and socio-economic status ($d = 1.86$; Guillon et

Low self-esteem and internalising disorders in young people: A systematic review al., 2003). It was also found that those with depression scored lower on SE than those with anxiety disorders although this difference did not reach significance.

Similarly, in a small but well-designed study of social threat activation, 20 patients with a diagnosis of social anxiety disorder (SAD), recruited through an outpatient specialist clinic ($d = 2.20$; Schreiber et al., 2012) were compared to healthy matched pairs. Those with SAD (eight of whom had co-morbid depression) were found to have an average SE ($M = 23.6$) ~~that is indicated to be~~ within the low range (< 25 ; Isomaa et al., 2013).

Exclusively clinical samples (diagnosis specific)

With reference to samples recruited exclusively through child services, co-morbidity has been shown to increase the likelihood that a young person will also report having LSE. Orvachel et al. (1997) found that within a sample of young people recruited through an outpatient child and adolescent mood disorders program, depression severity (e.g. meeting criteria for double depression –MDD and dysthymia) was associated with the lowest SE scores ($M = 20.5$) on the Coopersmith Self-Esteem Inventory (CSEI; Coopersmith, 1967), with young people meeting the criteria for other Axis 1 disorders ($M = 32.3$), and MDD ($M = 27$) evidencing higher scores. Normative data for the overall SE on the CSEI suggests an average score of 63.5 ($SD = 15$) in 8-16 year olds highlighting how comparatively low the SE in all the disorder groups were found to be.

In contrast, Kazdin and colleagues (1983) did not find a difference between a small clinical sample of depressed (as measured on older DSM-III criteria) and non-depressed young people (including those making criteria for psychosis) recruited through an inpatient Children's Psychiatric Intensive Care Unit, although the scores of

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both samples were low compared ~~edative to~~ with normative data (e.g. ~~m~~Mean CSEI score = 33.4 in 'depressed group').

Summary of effect size

Effect sizes for the included studies ranged from $d = 0.39$ (indicating a small to medium effect size) to 2.27 (large effect size), with the majority of studies (six out of seven) suggesting a large effect (> 0.8).

Question 2. Does low self-esteem in childhood and adolescence (18 years of age and younger) predict the development of depressive and anxiety symptomology in adolescence and young adulthood?

A total of 106 articles were identified, with eight articles meeting the relevant inclusion criteria (Figure 2).

[INSERT FIGURE 2]

In terms of the analysis, studies relevant to predicting later symptoms of anxiety and depression will be presented separately (See Table 2 for details).

INSERT TABLE 2

Overview of studies

Eight longitudinal studies met the inclusion criteria for the second part of the review. Studies included prospective longitudinal community samples of young people (e.g. Boden, Fergusson, & Horwood, 2008; Ferreiro, Seoane, & Senra, 2011; van Tuijl, de Jong, Sportel, de Hullu, & Nauta, 2014), with one study recruiting some of the sample from drug and alcohol services (Robertson & Simons, 1989) and another from an exclusively adolescent female sample population (Bohon, Stice, Burton, Fudell, & Nolen-Hoeksema, 2008) with the aim of accessing individualssamples with an increased

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likelihood of internalising symptoms. The age range ~~of participants at~~^{for} baseline ~~participants~~ was 11-18 years, with ~~participants in the~~^{the} follow-up stages ~~ranging~~^{taking place between} ~~from~~ 13-26 years (defined as emerging adulthood by Arnett, 2000). Follow-up lengths ranged from 1 to 6 years, with some of the studies including multiple time points (e.g. Orth, Robins, & Roberts, 2008). All studies were deemed to be at least of adequate quality, with two studies meeting the criteria for high quality studies as a result of reporting statistical power (Orth et al., 2006), and controlling for the impact of treatment by excluding those who had treatment prior to follow-up (Van Tuijl et al., 2014).

Predicting follow-up symptoms of depression from LSE in adolescence

A number of studies investigating the association of LSE with the development of anxiety and depressive symptomatology in later adolescence and emerging adulthood have found a statistically significant association between SE in childhood and later mental health outcomes (Boden et al. 2008; Orth et al., 2008; Van Tuijl et al., 2014). These studies reported a significant association, albeit small effect, of time 1 SE in predicting time 2 depressive symptomatology (e.g. $r = -.08$ in Orth et al., 2008; Study 1). Trzesniewski and colleagues (2006) demonstrated a similar significant effect in that adolescents with LSE were 1.26 times more likely to develop MDD by the age of 26 than healthy adolescents. These significant associations held when controlling for baseline depression (Orth et al., 2008; Trzesniewski et al., 2006, Van Tuijl et al., 2014), ~~and~~ socio-economic status and IQ (Trzesniewski et al., 2006).

There are a number of additional confounding variables that are likely to influence the longitudinal relationship between LSE and depression. Boden et al. (2008) found that although SE at age 15 was significantly associated with depression and anxiety disorder at ages 18, 21 and 25, this effect was ~~reduced to non-~~

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~~significance~~no longer significant when controlling for a number of further co-occurring psychosocial risk factors including attachment difficulties, previous mental health difficulties, physical and sexual abuse (Boden et al, 2008). This suggests that the picture linking the LSE and later mental health problems is complex and multi-faceted, and likely to be influenced by the accumulation of multiple risk factors.

A number of further studies have negated to find any significant association (effect sizes range from $r = -.03$ to $-.33$) between LSE and the development of depression in later adolescence and emerging adulthood (Bohon et al., 2008; Ferreiro et al., 2011; Robertson & Simons, 1989) or to predict the onset of a range of depressive disorders or MDD and dysthymia at 18 from SE measured annually (only SE at age 15 in females predicted the onset of MDD at the age of 18 ($r = -.06$; Canals, Domènech-Llaberia, Fernández-Ballart, & Martí-Henneberg, 2002). These studies controlled for baseline depression, with a number of additional factors controlled for including attributional style (Bohon et al., 2008), trait anxiety and personality traits (Canals et al., 2002). These studies contained smaller sample sizes than those previously discussed which ~~is~~are likely to reduce the ~~ir~~ power to detect a small effect.

Predicting follow-up anxiety from LSE in adolescence

Fewer studies exist which meet the inclusion criteria and examine the effect of LSE and its association with the development of anxiety symptomatology in adolescence and emerging adulthood. In a study using the ~~R~~evised Children's ~~a~~Anxiety and Depression ~~S~~scale (RCADS) completed by Van Tuijl et al. (2014), a significant association ($r = -.3$, $p < .05$) was found with LSE predicting follow-up SAD symptoms. Interestingly, Trzesniewski et al. (2006) found that adolescents with LSE were 1.6 times more likely to develop an anxiety disorder, a higher likelihood than was found in depressed ~~participant~~sample in the same study.

~~Similar to the findings for the development of depressive symptoms~~ Similarly, although Boden and colleagues (2008) found that SE was predictive of the development of an anxiety disorder in early adulthood ($B = -.11, p < .0001$), this was reduced to non-significance ($B = -.02, p > .05$) when controlling for other associated psychosocial child factors including gender, anxiety and shyness, and neuroticism.

Summary of effect size

Overall, calculation of effect size indicated a relatively small effect of depression on the development of later depression ($r = -.03$), although two studies indicated a medium effect size (e.g. $r = .28$ in Van Tuijl et al., 2014). In relation to anxiety, a medium (to large) effect size was indicated, although it should be noted that this only included two studies and therefore should be ~~interpreted~~ regarded with caution.

Discussion

The few studies found that investigated ‘clinically significant’ anxiety and depression consistently supported the co-occurrence of LSE and internalising disorders in young people, particularly in those with depression. However, less evidence exists for the association between reported LSE in childhood and adolescence and anxiety/depression in later adolescence/emerging adulthood.

Association between LSE and anxiety/depression

Evidence for the co-occurrence of LSE and anxiety and/or depression in young people was found. A pattern emerged in relation to specific diagnoses. Young people with depression tended to report lower self-esteem than those with anxiety disorders, while those with co-morbid mental health difficulties were found to have the lowest SE. The additive effects of co-morbid psychiatric diagnoses particularly when depression is present, has also been reported in adult samples (Silverstone & Salsali, 2003). These

Low self-esteem and internalising disorders in young people: A systematic review findings are consistent with the wider literature of correlational studies exploring the relationship between SE and mental health difficulties in young people (Battle, 1978; Byrne, 2000; Plunkett et al., 2007).

Association between LSE and internalising disorders in later adolescence/ emerging adulthood

Evidence for the value of LSE in predicting the development of anxiety and depressive symptomatology in adolescence and emerging adulthood is mixed, with some studies demonstrating a significant but relatively small effect (Trzesniewski et al., 2006) and others negating to find any significant association (Bohon et al., 2008; Robertson & Simons, 1989). Although it is important to acknowledge the major impact that even small effects can have over time and that adult mental health outcomes are multi-determined in their nature (Evans, 1994), it is likely that the inclusion of different confounding variables, sample sizes (with the smaller scale studies less likely to find a small effect), and the relative instability of SE in adolescence (Trzesniewski, Donnellan, & Robins, 2003) are implicated in this finding.

The identified research points to a complex and multi-factorial relationship between self-esteem and mental health outcomes in later adolescence and emerging adulthood. Boden and colleagues (2008; p.319) propose that "the effects of self-esteem during adolescence on later developmental outcomes [are] weak, and largely explained by the psychosocial context within which self-esteem develops", including sexual abuse, family changes, physical punishment, and early mental health difficulties. Based on the reviewed literature, it remains that evidence for the vulnerability model in childhood and adolescent is less established than for adults (Sowislo and Orth, 2013).

Strengths and limitations of the review

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This study provides a systematic review of SE in young people with clear, pre-determined inclusion and exclusion criteria and a structured assessment of study quality. The inclusion of a second reviewer to reach consensus where there was uncertainty around particular studies also adds to the reliability of the review.

Certain limitations must also be acknowledged. The current review only included articles published in English and may have been influenced by publication bias or missed relevant articles published in other languages (as described in Müller et al., 2013).

Clinical implications

The reviewed literature suggests that young people, particularly those with co-morbid anxiety and depression are also likely to have LSE. With regard to clinical practice, this suggests that further research into the utility of Fennell's (1997) model of LSE for this client group is indicated. This model provides a trans-diagnostic framework for making sense of both anxiety and depressive symptoms, while emphasizing a common pathway across disorders. As the stability of SE increases during adolescence and emerging adulthood, utilizing this model as a framework for intervention at an early stage may be appropriate at an age when SE may be more amenable to change.

Although research in this area remains in its infancy, this review suggests that young people with co-morbid anxiety/depression, and LSE may benefit from a formulation and intervention based on Fennell's model of LSE. Helpful strategies may involve positive data logging, and the development of a new 'bottom line'. Based on the developmental model and understanding of SE stability, it may be that this intervention is more effective when working with older adolescents where LSE appears to represent a vulnerability factor for the development of ongoing mental health difficulties (Fennell, 1999). It is worth noting that, as described by Boden and colleagues (2008)

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this intervention should not to the neglect of other contextual factors that may contribute to LSE. Within the framework of a meta-analysis, Haney and Dulak (1998) propose that programs focusing on self-esteem/ self-concept are more successful when delivered to young people with rather than without mental health difficulties and when theoretically-driven. Although to date there are no evaluations of Fennell's treatment model for LSE in young people, the findings of this meta-analysis study are promising. As yet, there does not appear to be sufficient evidence for the implementation of self-esteem programmes/interventions to circumvent the development of mental health difficulties in later adolescence and early adulthood.

Limitations

It is also worth noting that drawing conclusions from studies that use a variety of diagnostic and SE measures can be challenging. In quantifying self-esteem, some studies used adapted and translated versions of the gold-standard RSES (Carbonell et al., 1998; Isomaa et al., 2012), while others used the CSEI (Guillon et al., 2003; Orvachel et al., 1997). A number of studies relied exclusively on validated measures to determine clinically significant symptomatology (e.g. Beck Depression Inventory, both short versions and translations, and Social Phobia Inventory used in Isomaa et al., 2012), while others relied on diagnostic interviews (e.g. Schedule for Affective Disorders (K-SADS) used in Schreiber et al., 2012). Within the literature, it is generally regarded that diagnostic interviews provide more reliable and valid indications of clinically significant internalising disorders (Orth et al., 2008). The multitude of SE measures and inclusion of confounding variable creates an added complexity. For example, only one study controlled for intervention prior to follow-up (Van Tuijl et al., 2014).

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Overall, the sample sizes of young people with clinically significant anxiety and depression were relatively small (ranging from 12 with MDD in Kazdin et al., 1983 to 129 in Orvachel et al., 1997 and 4 meeting the criteria for anxiety disorder in Kazdin et al., 1983 to 108 with SAD in Isomaa et al., 2013). Retention rates for follow-ups differed amongst the included studies with data from the Dunedin Multidisciplinary Health and Development Study demonstrating excellent retention (86% of initial cohort completed measures at 15; Trzesniewski et al., 2006) but large drop-out rates in other studies due to a combination of participant drop out and planned budgetary cuts (e.g. Orth et al., 2008; Van Tuijl et al., 2014). In addition, a number of studies noted a difference on the variables of interest between those who dropped out and others at baseline. For example, Van Tuijl et al. (2014) found that those who dropped out were more likely to report the symptoms of interest (i.e. low SE, and higher depressive symptomatology) pointing to the challenges of undertaking large-scale research in this area.

As noted, although Orth et al. (2009) point to the continued importance of understanding the relationship between LSE and depressed mood, the overlap between items in the variety of measures of SE and depression must be acknowledged as a significant limitation to the identified associations.

Future Directions

Taking the small number of studies identified by for the current review into account suggests that highlights the need for further larger-scale studies of young people with clinically significant anxiety and depression within child and adolescent mental health services (CAMHS). This would be beneficial to add to the weight of evidence presented in the current review. Given the introduction of routine outcome measures in services in the UK, data could potentially, with the introduction of an additional self-

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esteem measure, be collected as part of routine clinical practice. This could be implemented with the view to evaluating the outcomes of young people with co-morbid internalising disorders and LSE and evaluating whether Fennell's trans-diagnostic model shows as promising results as is beginning to emerge in adults (Waite et al., 2012). A number of smaller scale case series may be helpful to first establish whether a larger trial of CBT is indicated.

Acknowledgements

Study funding: There was no external funding for this review.

Conflicts of interest: The authors declare that they have no competing or potential conflicts of interest.

Contributorships: Lisa Keane and Maria Loades collaborated on devising the research questions. Lisa Keane conducted the searches and analysed the papers, with Dr Loades reviewing a selection for the reliability process. Lisa Keane drafted the manuscript with input and supervision from Dr Loades in the critical revision of the paper.

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